

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF OKLAHOMA**

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Voice Domain Technologies, LLC,)	
)	
Plaintiff,)	Case No. CIV-08-701-HE
)	
v.)	
)	
Philips Electronics North America Corporation,)	
)	
Defendant.)	
<hr/>)	

**DEFENDANT PHILIPS ELECTRONICS NORTH AMERICA CORPORATION'S
OPENING BRIEF IN SUPPORT OF ITS PROPOSED CLAIM
CONSTRUCTIONS**

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I. INTRODUCTION

Philips Electronics North America Corporation (“PENAC”) proposes construction of eleven terms used in claims of the asserted patents.¹ Each of the proposed constructions is consistent with the claim language and the intrinsic record. PENAC’s proposed constructions achieve the twin goals of explaining and clarifying the claims for a lay jury, while accurately bounding the legitimate scope of the claims.

II. BACKGROUND OF THE ASSERTED PATENTS

The three asserted patents² each list Bruce J. Barker as the sole applicant. Mr. Barker is a patent attorney, and filed and prosecuted each of the patents on behalf of himself and his corporate alter-ego, Voice Domain. The patents are directed generally to voice-recording apparatus. A brief summary of the relevant subject matter of each asserted patent is set forth below.

A. The ’566 Patent

The ’566 patent claims a “portable voice recording device” having a memory for storing a “memory signal” representative of a speech input. Exh. 2 at Claims 1 and 4. During prosecution, Voice Domain relied upon the claimed “output port controller for transmitting said memory signal to a voice processing computer device at a rate substantially more rapid than the rate at which said electrical signal was generated” to

¹ PENAC’s proposed constructions are presented for convenience in Exh. 1.

² The asserted patents are U.S. Patent Nos. 5,548,566 (filed Apr. 13, 1994) (“the ’566 patent”) (Exh. 2); 5,818,800 (filed June 7, 1995) (“the ’800 patent”) (Exh. 3); and 6,281,883 (filed Sept. 8, 1994) (“the ’883 patent”) (Exh. 4).

distinguish prior art cited by the USPTO. July 20, 1995 Response to Final Office Action (Exh. 5) at V00903-V00907. The '566 patent discloses two embodiments for performing this rapid “download” function.

In the first embodiment (Fig. 2), the memory is a magnetic tape 30 and the “download” routine (Fig. 3(b)) is controlled by CPU (Central Processing Unit) 44. Specifically, when the user asserts a download switch 22, CPU 44

directs tape controller 54 to turn the [tape] reels 32, 34 forward at a relatively rapid rate R_d (... preferably substantially greater [than the rate of recording or playback]) ... [A] demodulator 66 converts the [analog] tape signal into digital samples $d'(k)$ Serial Port controller 48 encodes the sample $d'(k)$ into a transmission signal $T(t)$. It then provides the signal $T(t)$ to the output port 24 for transmission to the remote device. The remote device ... includes a decoder for decoding the transmitted signal back into the digital samples $d'(k)$ [for storage or playback].

Exh. 2 at col. 4, ll. 17-35. In the second embodiment, shown in Fig. 4, the “memory device” is a digital memory 146 and CPU 144 is programmed to perform an analogous routine. *Id.* at col. 5, ll. 26-32.

B. The '800 Patent

The '800 patent claims a “portable voice storage peripheral” comprising a microphone, a memory, and “a position transducer for providing a position signal in response to a user’s actuation of said position transducer.” Exh. 3 at Claim 1. The specification of the '800 patent describes “a pointer device (such as a trackball or joystick)” corresponding to the claimed “transducer for providing a position signal.” *Id.* at col. 2, ll. 19-20. The position transducer allows the user to “navigate” the graphical

user interface of a host device, “such as a computer, television or other sophisticated device” *Id.* at col. 2, ll. 34-36; *see also id.* at col. 3, ll. 48-59.

The sole independent claim of the ’800 patent further recites “a controller” for performing two functions. First, when operated in a “portable mode,” the controller causes the microphone signal to be recorded in the peripheral’s memory. Second, when operated in a “local mode” the controller uses the microphone signal, the memory signal, and the position signal to control the host device. *Id.* at col. 2, ll. 32-36.

C. The ’883 Patent

The ’883 Patent claims a “data processing system” comprising a “handheld peripheral” coupled to a “processing system.” The handheld peripheral comprises, *inter alia*, “a voice command button” and “a voice data button” that provide respective “notification signal[s]” when pressed. The processing system comprises “a microphone interpretation mechanism which, in response to said command and data notification signals, determines when said microphone signal represents command and when it represents data.” Exh. 4 at Claim 1.

The ’883 patent has two embodiments of a “peripheral,” shown in Figures 1 and 3, respectively. Both embodiments feature a “record” or “voice data button” 26 (Fig. 1) / 46 (Fig. 3). When the “voice data button” 26/46 is asserted in either embodiment, the microphone signal is recorded in memory. *Id.* at col. 2, ll. 50-60. The embodiment of Fig. 1 includes “command buttons” labeled “mark,” “copy,” etc. When one of these buttons is asserted, the processing system performs the indicated operation. *Id.* at col. 3, ll. 14-44. This embodiment, however, is not claimed. The claimed (Fig. 3) embodiment

instead features a “voice command button” 48 that “allow[s] a user to dictate commands rather than actuating buttons representative of these commands.” *Id.* at col. 3, ll. 54-56.

For example, the user may assert the voice command button 48 and speak the word “mark” into the microphone. Since the voice command button was asserted, the computer examines the microphone signal to identify the spoken command. Upon recognizing the command “mark”, *the computer performs the same operation as performed when the mark button 18 of the previous embodiment was asserted.*

Id. at col. 4, ll. 4-11 (emphasis added).

III. The Law of Claim Construction

A. General Principles of Claim Construction

Claim construction is a question of law for the Court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). When construing the claims, the Court must look first at the intrinsic evidence: the claim language, the specification, and the prosecution history. *Id.* at 979. The Court may also consult contemporary technical and non-technical dictionaries to determine the meanings of terms. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996), *cert. denied* 522 U.S. 812 (1997).

Without reference to the prosecution history a claim may appear to have a broad construction. The applicant’s arguments to the USPTO during prosecution, however, may objectively convey that certain subject matter is not included within the claimed invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc), *cert. denied* 546 U.S. 1170 (2006).

B. Claim Terms Denoting Function, Rather than Structure, are Governed by 35 U.S.C. § 112, ¶ 6

Under 35 U.S.C. § 112, ¶ 6 (“§ 112, ¶ 6”), claim limitations may be expressed in functional, as opposed to structural, language. So-called means-plus-function limitations are “construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, ¶ 6. While § 112, ¶ 6 permits extra latitude in claim drafting by allowing patentees to recite functions rather than structure for performing the functions, the statute also limits the breadth of claims to which it applies. *See Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1582 (Fed. Cir. 1996) (recognizing the “compromise solution” reflected in § 112, ¶ 6).

Determining whether a claim term is a “means-plus-function” limitation is an issue of claim construction for the Court. *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). Recitation of the phrase “means for” is not necessary for § 112, ¶ 6 to apply. *See, e.g., Mass. Inst. of Tech., v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006) (construing the term “colorant selection mechanism” under § 112, ¶ 6). As the Federal Circuit has explained, claim limitations using the term “means” presumptively invoke § 112, ¶ 6 and claim limitations omitting the term “means” presumptively do not invoke § 112, ¶ 6. *Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1361 (Fed. Cir. 2000).

But even if a claim limitation omits the term “means,” § 112, ¶ 6 will apply “if the claim limitation is determined not to recite sufficiently definite structure to perform the claimed function.” *Id.* The presumption is rebutted if a preponderance of the evidence

shows that “the claim term fails to ‘recite sufficiently definite structure’ or else recites a ‘function without reciting sufficient structure for performing that function.’” *Apex, Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003).

Once § 112, ¶ 6 is found to apply, the actual construction of a means-plus-function limitation is a two-step process. The first step is “a determination of the function of the means-plus-function limitation. The next step is to determine the corresponding structure described in the specification and equivalents thereof.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). The structure corresponding to a means-plus-function element is not just any and all structure capable of performing the recited function, but rather the claim is limited to the specific structure the specification clearly links to or associates with the recited function. *O.I. Corp. v. Tekmar Co., Inc.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997) (“[t]he price that must be paid for use of that convenience [§ 112, ¶ 6] is limitation of the claim to the means specified in the written description and equivalents thereof.”).

IV. PENAC’s Proposed Constructions

A. “Voice Command” (’883 Patent, Claim 1) Means “Speech that Indicates an Operation Executed by the Processing System Specified by the Content of the Speech”

The specification of the ’883 patent plainly indicates that a “voice command” is a command “*to a computer.*” According to the specification,

The data entry device may also include a microphone attached to the chassis for providing an acoustic speech signal representative of a user’s speech. In this embodiment, the device may also include a *voice command button*, attached to the chassis, for providing, in response to a user’s input, a

command signal indicating whether the acoustic speech signal represents a spoken command.

This device allows the user to enter data and *commands to a computer* using a convenient hand held device.

Exh. 4 at col. 1, ll. 34-43 (emphasis added). The claimed “processing system” corresponds, broadly, to the computer described in the specification. Thus, PENAC proposes that the term be construed, in part, to mean “speech that indicates an operation executed by the processing system.”

The purpose of the voice command is to “allow[] a user to *dictate commands rather than actuating buttons representative of these commands.*” *Id.* at col. 3, ll. 54-56 (emphasis added).

For example, the user may assert the voice command button 48 and speak the word “mark” into the microphone. Since the voice command button was asserted, the computer examines the microphone signal to identify the spoken command. *Upon recognizing the command “mark”, the computer performs the same operation as performed when the mark button 18 of the previous embodiment was asserted.*

Id. at col. 4, ll. 4-14 (emphasis added). Thus, PENAC’s construction further recognizes that the commanded operation is “specified by the content of the speech.”

During prosecution, both Voice Domain and the Examiner read “voice command” consistent with the specification and PENAC’s proposed construction. For example, Voice Domain explained to the Examiner that:

The advantage of a voice command transducer is demonstrated by an exemplary embodiment described in the specification at page 7. In this example, a word[-]processing system is capable of converting voice input to text. It [(i.e., the word-processing system)] is also capable of implementing

spoken commands. The voice command transducer allows the user to quickly notify the system of when his voice should be treated as spoken command(s).

September 8, 1994 Preliminary Amendment (Exh. 6) at V00236 (emphasis added).

In its brief to the USPTO's Board of Patent Appeals and Interferences, Voice Domain further explained that:

To close [a] file, the user simply asserts the voice command button (conveniently housed in the same handheld device) and speaks the command "close file and save." Because the command button was asserted, *the computer responds* by closing the file, not by transcribing the words "close file and save" into the document.

July 1, 1996 Appeal Brief (Exh. 7) at V00329 (emphasis added).

It is axiomatic that claims should not be "construed one way in order to obtain their allowance and in a different way against accused infringers." *Chimie v. PPG Indus. Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005). Accordingly, PENAC's construction recognizes that, as used in the claims, the specification, and the prosecution history of the '883 patent, the term "voice command" refers to a command spoken to a computer, and does not include any type of human-to-human interaction. Accordingly, PENAC's construction of "voice command" to mean "speech that indicates an operation executed by the processing system specified by the content of the speech" is correct and should be adopted.

B. “Spoken Commands” (’800 Patent, Claims 6 and 8) Means “Speech that Indicates an Operation Executed by the Controller Specified by the Content of the Speech”

The ’800 patent is a continuation-in-part of the ’883 patent, and the term “spoken command” is used in the ’800 patent in the same manner as the term “voice command” is used in the ’883 patent. *Compare* Exh. 3 at col. 4, ll. 7-16 (describing using a spoken command “mark” to mark text) *with* Exh. 4 at col. 4, ll. 4-11 (describing using a voice command for the same purpose).³ Consistent with this one meaning used in both patents’ specifications, PENAC proposes to construe these terms as having essentially the same meaning.

As in the specification of the ’883 patent, the ’800 patent uses the term “spoken commands” to refer to “speech that indicates an operation executed by the controller” or processing system. Specifically, the specification of the ’800 patent states that “the computer may analyze the [microphone signal] samples to determine if the voice includes spoken commands *to be executed by the computer.*” Exh. 3 at col. 3, ll. 42-44 (emphasis added).

The specification of the ’800 patent further specifies that the commanded operation is “specified by the content of the speech,” in the same manner as the specification for the ’883 patent:

³ In fact, the terms “voice command” and “spoken command” are used interchangeably throughout both the ’800 and ’883 patents. *See, e.g.,* Exh. 3 at col. 4, ll. 4, 19 (“voice command”), col. 3, ll. 43, col. 4, ll. 6-7 (“spoken command”); Exh. 4 at col. 3, ll. 60, col. 4, ll. 4-5 (“voice command”), col. 4, ll. 3-4, (“spoken command”).

First, to mark or “select” a block of text, the user positions the cursor[,] asserts the *voice command* button 18[,] and speaks the word “mark” into the microphone. . . . *The computer* therefore examines the microphone signal to identify the spoken command “mark”. (It does not transcribe the word “mark” for insertion in the document).

... After selecting [a] block of text, the user can verbally instruct *the computer* to remove the selected text from the document with the voice command “cut”. If the user wishes to replace the text at a different location in the document, he repositions the cursor to the desired location and issues the vocal command “paste”. *In response, the computer inserts the selected text into the document at the cursor position.*

Id. at col. 3, l. 66-col. 4, l. 23 (emphasis added). Thus, like a “voice command” used in the claims of the ’883 patent, a “spoken command” takes the place of pressing a button that causes the controller to execute a specific operation. It is “speech that indicates an operation executed by the controller specified by the content of the speech.”

In view of the plain language of claims 6 and 8 and the specification of the ’800 patent, the term “spoken commands” should be given the construction proposed by PENAC.

C. “Said Command and Data Notification Signals” (’883 Patent, Claim 1) Means “Said Command Notification Signal and Said Data Notification Signal”

Claim 1 of the ’883 patent recites “[a] microphone interpretation mechanism which, in response to said command and data notification signals, determines when said microphone signal represents command and when it represents data.” Exh. 4 at col. 4, ll. 45-48. Elsewhere, Claim 1 refers to “a command notification signal,” “said command notification signal,” “a data notification signal,” and “said data notification signal.” In

order to provide a proper antecedent basis and to avoid confusion for a lay jury unfamiliar with claim interpretation, PENAC proposes that the term be construed consistent with its assumed intent to mean “said command notification signal and said data notification signal.”

D. “Voice Data” (’883 Patent, Claim 1) Means “Speech that is Recorded by the Processing System”

PENAC proposed that the term “voice data” be construed to mean “speech that is recorded by the processing system.” This construction is consistent with the specification and prosecution history.

Specifically, according to the specification “record button 26” permits voice information to be recorded. Exh. 4 at col. 2, ll. 50-51. Once record button 26 is asserted, a signal is sent “to the computer to indicate that the record button has been asserted” and recording may begin. *Id.* at col. 2, ll. 52-53. Although the specification never uses the term “voice data button” anywhere in the specification other than in Claim 1, the function of the “voice data button”-“providing a data notification signal indicating whether said voice data button is asserted”-matches the description of the record button 26 in the specification. Thus, because the “record button 26” is used to initiate recording voice information via the computer, the term “voice data” from the claim recitation “voice data button” should be read consistently with the specification to refer to speech that is recorded by the processing system.

Further, construing the term “voice data button” to mean speech that is recorded by the processing system is entirely consistent with the prosecution history of the ’883

patent. Specifically, in its August 30, 1995 Response to Office Action, Voice Domain amended Claim 28 to recite a “voice data button” rather than a “record button.” August 30, 1995 Response to Office Action (Exh. 8) at V00305. Notwithstanding this change in terminology from “record” to “voice data,” in the same submission in which it made the change, Voice Domain continued to use the terms “record” and “voice data” interchangeably in its arguments.⁴ And even later, in an Appeal Brief, Voice Domain explained that, “by asserting the voice data button and speaking into the microphone,” a user could record dictation, which “[t]he system’s voice recognition software converts ... to text” Exh. 7 at V00329. Thus, according to the intrinsic record, as understood by both the Examiner and Voice Domain, the term “voice data” refers to “speech that is recorded by the processing system.” Accordingly, this is the proper construction of the term “voice data.”

⁴ For example, Voice Domain explained that “[t]he processing system includes a microphone interpretation mechanism which, in response to the command and *data* notification signals, determines when the microphone signal represents command and when it represents *data*. Thus, the command and *record* buttons allow the user to conveniently notify the processing system whether the microphone represents data or command.” Exh. 8 at V00310 (emphasis added). Further, Voice Domain argued that “the claims are also allowable because they claim command and *record* buttons for notifying the processing system whether the voice input represents command or *data*.” *Id.* (emphasis added). And, once again, in its concluding arguments, Voice Domain referred to “[t]he claimed command and *record* button[s].” *Id.* at V00311 (emphasis added).

E. “Microphone Interpretation Mechanism which, in Response to Said Command and Data Notification Signals, Determines When Said Microphone Signal Represents Command and When it Represents Data” (’883 Patent, Claim 1) Invokes 35 U.S.C. § 112, ¶ 6

Claim 1 of the ’883 patent recites a “microphone interpretation mechanism which, in response to said command and data notification signals, determines when said microphone signal represents command and when it represents data.” Exh. 4 at col. 4, ll. 45-48. This limitation invokes 35 U.S.C. § 112, ¶ 6 because it both “fails to ‘recite sufficiently definite structure’” and “recites a ‘function without reciting sufficient structure for performing that function.’” *Apex, Inc.*, 325 F.3d at 1372.

1. Federal Circuit Precedent Establishes that the Term “Microphone Interpretation Mechanism” is a Non-Structural Term that Invokes § 112, ¶ 6

The Federal Circuit has repeatedly construed claim limitations with the term “mechanism” as invoking § 112, ¶ 6. For example, in *Mass. Inst. of Tech.*, the Federal Circuit held that the term “colorant selection mechanism” in a claim for a color processing system was a means-plus-function limitation. 462 F.3d at 1354. The court found that: (1) the term “mechanism,” like the term “means,” generally fails to “connote sufficiently definite structure” to avoid application of § 112, ¶ 6; (2) the modifier “colorant selection” lacked a standard dictionary definition; and (3) there was no indication that one of ordinary skill in the art would perceive the term “colorant selection mechanism” as connoting definite structure. *Id.* In *Aspex Eyewear, Inc. v. Altair Eyewear, Inc.*, the Federal Circuit performed a similar analysis in holding that the term

“retaining mechanisms” was a means-plus-function limitation. 288 Fed.Appx. 697, 704 (Fed. Cir. 2008).

By contrast, in *Greenberg* the Federal Circuit held that the term “detent mechanism” was not a “means-plus-function” limitation because dictionaries showed “that the noun ‘detent’ denotes a type of device with a generally understood meaning in the mechanical arts” 91 F.3d at 1583 (noting that dictionary definitions associated the term “detent” with structure such as a “catch, pawl, dog, or click” (citations omitted)).

Here, the modifier, “microphone interpretation,” is clearly more akin to the modifiers at issue in *Mass. Inst. of Tech.* (“colorant selection”) and *Aspex Eyewear* (“retaining”) than in *Greenberg* (“detent”). Although “microphone” is a noun, PENAC has not found a dictionary that defines the complete phrase “microphone interpretation.” The ordinary meaning of “interpretation” is “[t]he *action* of interpreting or explaining,” which emphasizes its essentially functional character. See 7 OXFORD ENGLISH DICTIONARY 1132 (2d ed. 1989) (“OED”) (Exh. 9) (emphasis added).

The recitation of a “microphone interpretation mechanism” conveys no definite structure to one of ordinary skill in the art. In order to interpret the claims, one of ordinary skill in the art would be forced to examine the function attributed to the “microphone interpretation mechanism” in the claim, and then look to the specification to determine what Voice Domain discloses to perform this function. In other words, one would have to perform the analysis called for by § 112, ¶ 6.

2. “Microphone Interpretation Mechanism” Must be Construed to Include the Corresponding Structure from the Specification and Equivalents

Because the “microphone interpretation mechanism” limitation is a means-plus-function limitation, its construction is arrived at by (1) “determin[ing] the function of the means-plus-function limitation,” and (2) “determining the corresponding structure described in the specification and equivalents thereof.” *Medtronic*, 248 F.3d at 1311.

The function of the “microphone interpretation mechanism” is readily found. The “microphone interpretation mechanism ..., in response to said command and data notification signals, determines when said microphone signal represents command and when it represents data.” Exh. 4 at col. 4, ll. 45-48. Looking to the specification of the ’883 patent, structure corresponding to the function of the “microphone interpretation mechanism” is disclosed:

FIG. 3 illustrates a data entry device 40 for allowing a user to dictate commands rather than actuating buttons representative of those commands. Data entry device 40 includes a ... record button 46 ... [and] a voice command button 48 which, when asserted, causes the data entry device to transmit a voice command signal over cable 28 to notify the computer that the microphone signal represents a spoken command.

Id. at col. 3, l. 54-col. 4, l. 4.

The Federal Circuit has held that “[i]n a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.” *WMS Gaming Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (emphasis

added); *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005) (“A computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, *and the corresponding structure is the algorithm.*” (emphasis added)).

Thus, the structure that performs the function of the claimed “microphone interpretation mechanism” is “a computer programmed with software that, in response to said command and data notification signals, determines when said microphone signal represents a voice command and when it represents voice data.” Accordingly, this is the construction that the Court should adopt under § 112, ¶ 6.

F. “Coupling Mechanism for Providing Said Microphone Signal, Said Command Notification Signal, Said Data Notification Signal, and Said Cursor Signal to Said Processing System” (’883 Patent, Claim 1) Invokes 35 U.S.C. § 112, ¶ 6

Here, the functional modifier “coupling” is most analogous to the modifier, “retaining,” which the Federal Circuit in *Aspex Eyewear* construed to be a means-plus-function limitation. “Coupling” means “joining in couples, pairing,” or “anything that couples, or is used to join together.” 3 OED at 1050 (Exh. 10). Contemporary technical dictionaries define “coupling” in the context of data transmission to mean “[t]he association of two or more circuits or systems in such a way that power or signal information may be transferred from one to another.” THE IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONICS TERMS 229 (6th ed. 1996) (Exh. 11). These functional definitions do not identify what structure is used to “join together” or “associate” different elements. Nor does Claim 1 specify any structure that constitutes

the “coupling mechanism.” Rather, Claim 1 only states that the “coupling mechanism” performs the recited function of “providing said microphone signal, said command notification signal, said data notification signal, and said cursor signal to said processing system.” The structure of the “mechanism” used to accomplish this function is left undefined.

Because Voice Domain opted to claim the coupling in functional rather than structural terms, a proper construction of the term “coupling mechanism,” includes only the structure described in the specification of the ’883 patent which performs the function of the “coupling mechanism,” and equivalents thereof. The function of the “coupling mechanism” is recited in Claim 1 to be “providing said microphone signal, said command notification signal, said data notification signal, and said cursor signal to said processing system.” Exh. 4 at col. 4, ll. 39-42. The structure disclosed to perform this function includes: transmission cable 28, microphone buffer/amplifier 30, track ball buffer/amplifier 32, control switch buffer/amplifier 34, and radio transmitter 36. *Id.* at col. 1, l. 67-col. 2, l. 5, col. 2, ll. 11-16, 38-40, 51-53, col. 4, ll. 1-4. Thus, the term “coupling mechanism” should be construed to include this structure and its equivalents.

G. “Speech Recognition Mechanism which Generates Text Data Representative of a Microphone Signal Designated as Data by Said Interpretation Mechanism” (’883 Patent, Claim 2) Invokes 35 U.S.C. § 112, ¶ 6

Here, the modifier “speech recognition” is inherently functional, rather than structural. The term “recognition” means “[t]he action or fact of perceiving that some thing, person, etc. is the same as one previously known.” 13 OED at 341 (Exh. 12).

Claim 2 provides no structure for performing the recited function of “generat[ing] text data representative of a microphone signal designated as data by said interpretation mechanism.” As in *Aspex Eyewear* and *Mass. Inst. of Tech.*, the term “speech recognition” does not fill the void of structure in the claim. Pursuant to § 112, ¶ 6, therefore, the proper construction of the “speech recognition mechanism” limitation must be restricted to the corresponding structure described in the specification, and equivalents thereof.

The structure from the specification that corresponds to the claimed function is a computer with speech recognition software for converting digital speech samples to text, which is then displayed on the computer’s screen for viewing by the user, as disclosed in U.S. Patent No. 5,036,539 (filed July 6, 1989) titled “Real Time Speech Processing Development System” and U.S. Patent No. 5,005,203 (filed Mar. 30, 1988) titled “Method Of Recognizing Continuously Spoken Words,” which are incorporated by reference into the 883 patent.⁵ Exh. 4 at col. 1, ll. 12-20; col. 2, ll. 23-28. Accordingly,

⁵ In the specification of U.S. Patent No. 5,036,539, the structure corresponding to the “speech recognition mechanism” is recognition subsystem RS, including: a master processor; a plurality of template matching processors in parallel; a speech signal processor connected to the speech signal input device; ICS-IOO four-channel AID and D/A converter at 400 KHz sampling rate; four 255-tap programmable digital FIR filters; Sky Challenger board containing two TMS32020s at 20 MHz clock rate to perform front-end signal processing; seven Motorola 68020 based single-board processors (one serving as the master processor; the other six to perform template matching); recognition subsystem control structure (Fig. 4); message protocol for speech recognition (Fig. 7). Exh. 13 at col. 4, l. 6 - col. 5, l. 36.

In the specification of U.S. Patent No. 5,005,203, the corresponding structure includes: first processing circuit 16; vocabulary memory 18; first memory 20; second processing
(continued on next page)

the construction of the term “speech recognition mechanism” should include these forms of structure and equivalents thereof.

H. “Output Port Controller for Transmitting Said Memory Signal to a Voice Processing Computer Device at a Rate Substantially More Rapid than the Rate at Which Said Electrical Signal Was Generated” (’566 Patent, Claims 1 and 4) Invokes 35 U.S.C. § 112, ¶ 6

The term “output port controller for transmitting said memory signal to a voice processing computer device at a rate substantially more rapid than the rate at which said electrical signal was generated” describes a function rather than the structure to perform the claimed function, and therefore invokes § 112, ¶ 6.

Several courts have found that variants of the term “controller” should be construed as means-plus-function limitations.⁶ In *Toro Co. v. Deere & Co.*, for example, the Federal Circuit reversed the district court and held that the term “control mechanism for controlling the operation of [a] valve” was a means-plus-function limitation. 355 F.3d 1313, 1325 (Fed. Cir. 2004). Notwithstanding the absence of “means for,” the Federal Circuit held that the limitation invoked § 112, ¶ 6 because the claim “discloses a function for a ‘control mechanism’ but does not provide sufficient structural description

(continued from previous page)

circuit 22; speech model memory 24; syntax classes memory 26; second memory 28; and method (Fig. 1). Exh. 14 at col. 7, l. 28 - col. 8, l. 38.

⁶ See also *Diagnostic Group, LLC v. Benson Med. Instruments Co.*, 2005 WL 715935 at *20-21 (D. Minn. Mar. 28, 2005) (rejecting an argument that the term “means for controlling” was not a means-plus-function limitation, because the claim failed to provide sufficient structure to perform the recited function of “controlling the means for switching”).

of this mechanism.” *Id.* Further, in *Biomedino LLC v. Waters Techs. Corp.*, the Federal Circuit rejected the patentee’s argument that “means for controlling” could escape means-plus-function treatment on grounds that a “control” denotes a form of definite structure. 490 F.3d 946, 950 (Fed. Cir. 2007), *cert. denied* 128 S. Ct. 653 (2007). Similarly, claims 1 and 4 of the ’566 patent merely recite what the “controller” is used “for,” rather than suggest any type of structure for performing the claimed function.

By contrast, in *LG Elecs., Inc. v. Bizcom Elecs., Inc.* the Federal Circuit found that the term “control unit” was not governed by § 112, ¶ 6, because “[t]he *claim itself* provide[d] sufficient structure, *namely ‘a CPU and a partitioned memory system’* for performing the stated function.” 453 F.3d 1364, 1372 (Fed. Cir. 2006), *rev’d on other grounds*, 128 S. Ct. 2109 (2008) (emphasis added). In *Database Excelleration Sys. Inc. v. Imperial Tech., Inc.*, the district court likewise held that the term “control circuit” avoided treatment under § 112, ¶ 6 because “[t]he term ‘circuit’ alone indicates sufficient structure” 48 U.S.P.Q.2d 1533, 1537 (N.D. Cal. 1998). However, such a specific and definite recitation of structure is missing from claims 1 and 4 of the ’566 patent. Thus the rationales of *LG Elecs.* and *Database Excelleration Sys.* are inapplicable to the “output port controller” limitation at issue here.

The presumption that § 112, ¶ 6 is not invoked by the “output port controller” limitation is further overcome because the specification fails to disclose any “controller” that performs the *entirety* of the recited functions. *See Nilssen v. Motorola, Inc.*, 80 F. Supp. 2d 921, 934 (N.D. Ill. 2000) (construing “power conditioning circuit” pursuant to

§ 112, ¶ 6 because “the disclosed structural elements—the inverter and rectifier alone—do not suffice ‘to perform *entirely* the recited function.’”) (emphasis added).⁷

Here, the claimed function of the “output port controller” is to “transmit[] said memory signal to a voice processing computer device at a rate substantially more rapid than the rate at which said electrical signal was generated.” Exh. 2 at col. 6, ll. 11-14. Although the ’566 patent describes a serial port controller 48 (148), this controller does not “suffice to perform entirely the recited function.” As disclosed, the “[s]erial [p]ort controller 48 encodes the sample $d'(k)$ into a transmission signal $T(t)$. It then provides the signal $T(t)$ to the output port 24 for transmission to the remote device.” Exh. 2 at col. 4, ll. 30-34. However, the serial port controller 48 (148) transmits the samples $d'(k)$ only at the rate at which they are provided by *additional structure that is disclosed in the specification, but not recited in the claims*.

Specifically, when the user asserts a download switch 22, CPU 44 “directs tape controller 54 to turn the [tape] reels 32, 34 forward at a relatively rapid rate R_d (. . . preferably substantially greater [than the rate of recording or playback]) [A] demodulator 66 converts the [analog] tape signal into digital samples $d'(k)$ ” which are

⁷ See also *Power Integrations, Inc. v. Fairchild Semiconductor Int’l.*, 422 F. Supp.2d 446, 459-60 (D. Del. 2006) (“Although one skilled in the art would know the functionality of [the claimed] soft start [circuit that provides a signal instructing said drive circuit to disable said drive signal during at least a portion of said on-state of said maximum duty cycle], the Court is not persuaded that such a person would also know the precise structures for a soft start circuit, because the function of a soft start circuit can be achieved in a variety of ways making it unclear what the specific structures are for performing the recited functions”).

provided to the serial port controller 48, as described above. *Id.* at col. 4, ll. 9-35. Thus, the claimed function of the “output port controller” is not performed by, e.g., the serial port controller 48 (148) alone.

Consequently, the construction of the term “output port controller” must be determined with reference to the specification of the ’566 patent, pursuant to § 112, ¶ 6. The corresponding structure from the specification includes: download switch 22, switch status register 42 (142), CPU 44 (144), memory 46 (146), tape controller 54, serial port controller 48 (148), address decoder 50(150), tape read buffer 52, demodulator 66, address bus Abus, data bus DB, and Download routine (Fig. 3(b)). *Id.* at col. 2, ll. 26-48, col. 4, ll. 15-44. Construction of the “output port controller” limitation should include these structural elements, and their equivalents.

I. “Controller Having a Portable Mode and a Local Mode of Operation, Wherein During Said Portable Mode of Operation, Said Controller Stores in Said Memory a Memory Signal Representative of Said Microphone Signal Commencing at a Location in Said Memory Identified by Said Position Signal, and During Said Local Mode of Operation, Said Controller Provides Said Microphone Signal, Said Memory Signal and Said Position Signal to a Remote Voice Processing System for Controlling Said Processing System” (’800 Patent, Claim 1) Invokes 35 U.S.C. § 112, ¶ 6

Claim 1 of the ’800 patent recites a “controller having a portable mode and a local mode of operation,” but indicates only the controller’s function, not its structure. Similar to the term “output port controller” from the ’566 patent, this functional recitation must be construed under § 112, ¶ 6.

As explained above, dictionary definitions of the term “controller” identify a function rather than definite structure. Similar to the “means for controlling” in

Biomedino, and unlike the “control unit” in *LG Elecs.* or the “control circuit” in *Database Excelleration Sys.*, the “controller” in Claim 1 of the ’800 patent denotes no definite structure itself, and is not associated with definite structure by other claim terms. Claim 1 merely refers to the two functional modes of the “controller,” and the functions of “stor[ing]” and “provid[ing]” signals. Exh. 3 at col. 6, l. 64-col. 7, l. 7. Thus, because the “controller” is recited in terms of its function rather than any structure for performing the claimed function, it must be construed pursuant to § 112, ¶ 6.

As recited in the claim, the function of the “controller” is:

[1] during said portable mode of operation, . . . [to] store[] in said memory a memory signal representative of said microphone signal commencing at a location in said memory identified by said position signal, and [2] during said local mode of operation, . . . [to] provide[] said microphone signal, said memory signal and said position signal to a remote voice processing system for controlling said processing system.

Exh. 3 at col. 6, l. 66-col. 7, l. 7.

Under *WMS Gaming*, the structure disclosed in the ’800 patent that performs these dual functions includes: output terminal 30, controller 60, CPU 62, memory 64 (including stored program to be executed by CPU), decoder 66, status register 68, A/D 70, microphone register 72, serial port 82, and local/portable mode switch 84. *Id.* at col. 4, ll. 50-67, col. 5, ll. 5-32, col. 5, l. 66-col. 6, l. 32. The “controller having a portable mode and a local mode of operation” limitation should be construed to refer to these elements of structure, and equivalents thereof.

J. “Position Transducer for Providing a Position Signal in Response to a User’s Actuation of Said Position Transducer” (’800 Patent, Claim 1) Invokes 35 U.S.C. § 112, ¶ 6

The ordinary meaning of the term “transducer” denotes function rather than structure. General purpose dictionaries define “transducer” as “[a]ny device by which variations in one physical quantity (e.g. pressure, brightness) are quantitatively converted into variations in another (e.g. voltage, position).” 18 OED at 394 (Exh. 15). Rather than claim an element of definite structure to perform the function of transduction in the ’800 patent, Voice Domain claimed only its function of transducing.

Courts have interpreted similar functional limitations as means-plus-function recitations. In *Clinical Innovations, LLC v. Utah Med. Prods., Inc.*, for example, the district court found the terms “pressure detection device” and “structure for detecting changes” to invoke § 112, ¶ 6 because neither the base nouns (“device” and “structure”) nor their modifiers (“pressure detection” and “for detecting changes”) connoted definite structure. 2007 WL 2688246, at *7 (D. Utah Sept. 11, 2007).

Similarly, the term “transducer” fails to suggest any definite form of structure. Its ordinary meaning connotes the function of transducing. Further, as in *Clinical Innovations*, its modifier, “position,” indicates no structure whatsoever to perform the function of transducing. Therefore, the term “position transducer” should be construed pursuant to § 112, ¶ 6.

The function of the “position transducer,” as recited in the claim, is to “provid[e] a position signal in response to a user’s actuation of said position transducer.” Exh. 3 at col. 6, ll. 61-63. The structure disclosed in the specification of the ’800 patent that

performs this function is: a trackball or joystick 14. *Id.* at col. 2, ll. 17-30, 52-60, col. 3, ll. 48-59. Consequently, under § 112, ¶ 6, the term “position transducer” limitation should be construed to refer to these elements of structure, and equivalents thereof.

K. “Cursor Position Transducer for Providing a Cursor Signal Representative of a Desired Cursor Position on a Display Screen of Said Processing System” (’883 Patent, Claim 1) Invokes 35 U.S.C. § 112, ¶ 6

As described above regarding the “position transducer” of the ’800 patent, the analogous “cursor position transducer” of the ’883 patent recites the function of “transducing” without indicating any structure to perform that function. The reasoning in *Clinical Innovations* is equally applicable here. As in *Clinical Innovations*, neither the base noun (“transducer”) nor its modifier (“cursor position”) indicate any structure.

Accordingly, the term “cursor position transducer” should be construed pursuant to § 112, ¶ 6. The recited function of the “cursor position transducer” is to “provid[e] a cursor signal representative of a desired cursor position on a display screen of said processing system.” Exh. 4 at col. 4, ll. 36-38. The structure disclosed in the specification of the ’883 patent for performing this claimed function includes “track ball device 16” and “well known cursor control keys.” *Id.* at col. 2, ll. 6-10, 28-37. Thus, the term “cursor position transducer” should be construed to include these structures, and equivalents thereof.

V. CONCLUSION

For reasons explained above, PENAC requests that the Court adopt its claim constructions and reject Voice Domain’s conflicting claim constructions.

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CERTIFICATE OF SERVICE

I hereby certify that on this 14th day of April, 2009, I electronically transmitted the attached document to the Clerk of Court using the ECF System for filing. Based on the records currently on file, the Clerk of Court will transmit a Notice of Electronic Filing to the following ECF registrants:

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